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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,966	09/18/2003	Brent M. Bradburn	10992499-6	8330

7590 09/08/2004

HEWLETT-PACKARD COMPANY
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P.O. Box 272400
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EXAMINER

BRINICH, STEPHEN M

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/665,966	Applicant(s) BRADBURN, BRENT M.	
	Examiner Stephen M Brinich	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 1,4-6,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 2,3,7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/9/04, 3/11/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-6, & 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Smutek et al.

Re claims 1 & 6, Smutek et al discloses (column 1, lines 24-53; column 2, lines 24-37; column 5, lines 24-33) the use of a scaled set of matrix values which are used to generate a scaled (e.g. one-tenth the linear size of the source pixel, in the given example) set of destination sub-pixels at a scale defined by the destination image resolution (e.g. the set of matrix values from 1-100 is set by the selection of a sub-pixel resolution of, in this example, ten times the pixel resolution of the source pixels - in general, the matrix values would be the set of values from one to the square of the resolution ratio). Each of the destination sub-pixels is dependent on a halftone relationship between the source pixel and the corresponding matrix value (i.e. if the source pixel value

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exceeds the corresponding matrix value, the sub-pixel is dark; otherwise, the sub-pixel is light). This process is carried out for each of the source pixels in order to produce a desired repeating pattern (e.g. Figure 3) representing the tonal value of the source pixel.

Re claims 4-5 & 9-10, the matrix values (Figure 1) are arranged in order of distance around the origin (the "1" value), such that a consistent and repeating pattern of destination pixels (Figure 3) is generated with priority values determined by distance from the origin (the destination pixels closest to the origin are set to "dark" first as the value of the origin pixel becomes darker).

Allowable Subject Matter

3. Claims 2-3 & 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 11-12 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 2 & 7, the pattern frequency associated with the destination pixels and scaled matrix array of the art of record is equal to, not less than, that of the source pixels.

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Re claims 3 & 8, the art of record describes the use of a single source pixel in conjunction with a scaled matrix array.

Re claim 11 (and dependent claim 12), the art of record does not teach or suggest of output sub-tones defined by the resolution of the destination image.

Response to Arguments

6. Applicant's arguments filed 9/18/2003 have been fully considered but they are not persuasive.

Applicant argues (Remarks 9/18/2003: page 7, lines 3-31) that Smutek et al does not teach or suggest the newly recited limitation of "a scaled set of matrix values defined by the resolution of the destination image" [emphasis in original].

However, as noted above, the matrix values of Smutek et al are defined by the resolution of the destination image. For example, in the embodiment disclosed by Smutek et al, the resolution of the destination sub-pixels is ten times that of the source pixels, and the matrix values are the range 1-100. Clearly, the latter is the result of the former, such that (for example) an embodiment in which the resolution of the destination sub-pixels is five times that of the source pixels, would have matrix values in the range 1-25 (as there would be twenty-five, rather than a hundred, sub-pixel cells to associate

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with these values). Thus, the matrix values of Smutek et al are defined by the resolution of the destination sub-pixels.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 703-305-4390. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9306.

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Hand-carried or courier-delivered correspondence pertaining
to this application should be directed to

US Patent and Trademark Office
220 South 20th Street
Crystal Plaza Two, Lobby, Room 1B03
Arlington VA 22202



Stephen M Brinich
Examiner
Art Unit 2624

smb
August 31, 2004